

BOOK REVIEWS

DATING IN EXPOSED AND SURFACE CONTEXTS
edited by Charlotte Beck, University of New Mexico Press,
Albuquerque, 1995. No. of pages: xiii + 239. Price \$45.00.
ISBN 0-8263-1523-2.

In collating this interesting collection of papers, Charlotte Beck aims 'to present a number of [these] methods in systematic detail, while demonstrating their successful use in the dating of the surface artifact record and exposed features of the natural landscape'. The volume represents 'a first cooperative effort among scientists of different backgrounds to address the real problem of dating in these contexts'. 'These contexts' might at first glance appear to be a rather varied and possibly arbitrary assortment of geomorphological and archaeological situations where one or other dating technique may be applied to determine the age of former land surfaces, surficial features and artifacts. However, this collection does make good sense. While often there may seem little overlap between techniques used to reconstruct, say, glacial retreat and those used to reconstruct the cultural development of a desert landscape, in this collection, both attempt to supplement conventional 'vertical', stratigraphic approaches with 'horizontal', spatial information. Many of the techniques developed to provide chronological control primarily within one discipline are thus directly applicable to another.

Beck has included the work of scientists from the USA, UK and Sweden, who provide detailed descriptions of the

means to determine chronological information using weathering rinds, Schmidt hammer measurements, obsidian hydration, rock varnish, thermoluminescence (TL) dating of surficial ceramic archaeological material, cosmogenic nuclides (primarily ^3He , ^{10}Be , ^{21}Ne and ^{26}Al , ^{36}Cl gets its own chapter), lichenometry and a novel application of dendrochronology. I was slightly disappointed by the lack of technical detail in the TL chapter (what mineral was measured, how was the important contribution from the cosmic dose estimated?), and further discussion of cosmogenic ^{41}Ca and the dating of limestone surfaces would have been interesting. The authors contributing to this text are in general refreshingly measured in their enthusiasm, providing a balanced and considered assessment of their respective techniques.

After getting used to the rather antiquated appearance (and strong smell!) of this volume, I found it stimulating and full of accessible technical details. The written style is uniformly clear, and a considered use of terminology throughout the volume renders it an informative summary of these techniques. I recommend it to anyone interested in the possibilities of understanding the development of landscapes, natural and cultural, through the Holocene and late Upper Pleistocene.

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LAND DEGRADATION: CREATION AND DESTRUCTION
by D. L. Johnson and L. A. Lewis, 1995. No. of pages:
xx + 335. Price: £19.99 (pb). ISBN 0-631-19244-1.

'Given the plethora of publications in recent years addressing land degradation problems and advocating sustainable development we risk redundancy in adding another volume to the discussion. However, our personal experiences . . . convinced us that there are still fresh perspectives on . . . the issues that merit consideration.'

By this statement in the preface, the authors set themselves a hard task to convince us that their judgement is correct. It is to their credit that generally they succeed and, in so doing, provide a very readable and stimulating text. Not surprisingly, it is a highly personal view of the subject as can be gauged by such chapter headings as 'Unintentional destructive change' and 'Creative destruction'. Although the expected examples are there of human impacts causing erosion, salinization and other, possibly irreversible, disturbances of the environment, consideration is given to instances where a habitat in one location is purposely

impoverished in order to create a sustainable utilization of the land elsewhere.

The strength of the text lies in the series of case studies that the authors use to support their arguments. These are carefully chosen to include examples from agricultural and industrial use of the land, the developed and developing world, and a variety of historical periods. The authors are less convincing in their general treatment of the factors influencing degradation which, as in the chapter on the physical domain, is rather superficial, reflecting perhaps the lack of space within which to develop ideas. Also, students will feel the lack of a clearly defined framework against which to hinge the case material. Nevertheless, the text is competitively priced and anyone planning a course on the subject would find that the case studies complement extremely well the more conceptual approach provided, for example, by C. J. Barrow in *Land Degradation* (Cambridge University Press, 1991).

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